

FIG. 1A

aagcgccggtctgcagtcggagacttgaggcagcaaacacgggtgcgaacgaaccggagggggagagagaatcaaacagctaagcgt 90
ggagcagacggcctgggaccagaaggggatcgatgcgaggagcgcaataataacaataataaaccacttcggagcaaacagcatat 180
aaagagctgcgaccaactgcagcctaaaaaatcaaacctgctcatgcacc 232

M V V Q T R F P S W I I L C Y I W L L G F A H T G E A Q A A
ATGGTGTGTTCAAACCGGTTCCCTTCGTGGATTATTTGTGTTACATCTGGCTGCTTGGCTTTCACACACGGGGAGGCGCAGGCTGCG 322
K E V L L L D S K A Q Q T E L E W I S S P P S G W E E I S G
AAGGAAGTACTATTACTGGACTCGAAAGCACAACAACAGAATTGGAATGGATTTCCTCCACCCAGTGGTGGGAAGAAATTAGTGGT 412
L D E N Y T P I R T Y Q V Q V M E P N Q N N W L R T N W :
TTGGATGAGAACTACACTCCGATAAGAATACACAGGTGTGCCAGGTCTGAGGCCAACAGAACTGGCTGCGGACTAAGTGGATT 502
S K G N A Q R I F V E L K F T L R D C N S L P G V L G T C K
TCTAAAGGCAACGCACAAAGGATTTTGTAGAATTGAAATTCACCTTGAGGGATTGTAATAGTCTTCCCGAGTCTGGGAACTTGCAAG 592
E T F N L Y Y Y E T D Y D T G R N I R E N L Y V K I D T I A
GAAACGTTTAAATTTGACTATTATGAAACAGACTACGACACCGGAGGAATATACGAGAAAACCTTTATGTTAAATAGACACCATTTGCT 682
A D E S F T Q G D L G E R K M K L N T E V R E I G P L S K E
GCAGATGAAAGTTTCACACAAGGTGACCTTGGTGAAGAAAGATGAAGCTGAACACTGAGGTGAGAGAGATTGGACCTTTGTCCAAAAAG 772
G F Y L A F Q D V G A C I A L V S V K V Y Y K K C W T I V E
GGATTCTATCTTGCTTTTCAGGATGTAGGGGCTTGATAGCATTGGTTTCTGTCAAAGTGTACTACAAGAAGTGTGAGGACCATTTGTTGAG 862
N L A V F P D T V T G S E F S S L V E V R G T C V S S A E E
AACTTAGCTGTCTTTCCAGATACAGTGACTGTTGCGGAATTTTCTCCTTAGTCGAGGTCCGTGGGACATGTGTGACGAGTGCCGAGGAA 952
E A E N S P R M H C S A E G E W L V P I G K C I C K A G Y Q
GAGGCAGAAAAATCCCCCAGAATGCATTGCAGTGAGAGAGAGTGGCTAGTACCCATTGGAATGCATCTGCAAGCAGGCTATCAG 1042
Q K G D T C E P C G R R F Y K S S S Q D L Q C S R C P T H S
CAAAAAGGGGCACTTGCGAACCTGTGGCCGAGGTTCTACAATCTTCTCTCAGGATCTCCAGTGTCTCGTTGTCCAACCCACAGC 1132
F S D R E G S S R C E C E D G Y Y R A P S D P P Y V A C T R
TTCTCTGACCGAGAAGGATCATCCAGGTGTGAATGTGAAGTGGTACTACAGAGCTCTTCTGATCCACCATACGTTGCATGCACGAGG 1222
P P S A P Q N L I F N I N O T I T V S L E W S P P A D N G G R
CCTCCCTCTGCACCACAGAACCTTATTTCAATATCAATCAACGACTGTAAAGTTTGAATGGAGTCTCCGGCTGACAACGGGGGAAGA 1312
N D V T Y R I L C K R C S W E Q G E C V P C G S N I G Y M P
AACGATGTACCTACAGAATACTGTGAAGCGGTGCAGTTGGGAACAGGGAGAATGTGTCCATGCGGAAGTAACATTGGATACATGCCC 1402
Q Q T G L E D N Y V T V M D L L A E A N Y T F E V E A V N G
CAGCAGACGGGATTAGAGGATAACTATGTCACTGTCACTGACCTACTTGCCTATGCAAAATTACACTTTTGAAGTTGAAGCTGTAAATGGA 1492
V S D L S R S Q R L F A A V S I T T G Q A A P S Q V S G V M
GTTTCGGACTTAAGCAGATCCAGAGGCTCTTCGCTGCTGTTAGCATCACCACCGGTCAAGCAGCTCCCTCGCAAGTGAGTGGAGTCATG 1582
K E R V L Q R S V Q L S W Q E P E E P N G V I T E Y E I K Y
AAGGAGCGAGTACTGCAGCGGAGTGTGCAGCTTCTGGCAGGAGCGGAGCATCCCAATGGAGTCATCAGGGAATATGAAATCAAGTAT 1672
Y E K D Q R E R T Y S T L K T K S T S A S I N N L K P G T V
TATGAGAAAGATCAACGGGAAAGGACGTACTCAACACTCAAAACCAAGTCCACCTCCGCTCCATTAATAATCTGAAACCGGGAACAGTG 1762
Y V F Q I R A V T A A G T G N Y S P R L D V A T L E E A S G
TACGTCTTTCAGATCCGGCGGTCACTGCTGCCGGTTATGAAACTACAGCCTTAGGCTTGATGTTGCCACACTTGAGGAAGCTTCAGGT 1852

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FIG. 1B

550 560 570
K M F E A T A V S S E Q N P V I I I A V V A V A G T I I L V
AAATGTTTGAAGCGACAGCAGTCTCCAGTGAACAGAATCCTGTCATCATAATGCTGTAGTGGCTGTAGCAGGGACCATCATCTTGGTG 1942

580 590 600
F M V F G F I I G R R H C G Y S K A D Q E G D E E L Y F H F
TTCATGGTGTTCGGCTTCATCATTGGAAGAAGGCACTGTGGTTATAGCAAGGCTGACCAAGAAGGGGATGAAGAACTCTACTTTCATTTT 2032

610 620 630
K F P G T K T Y I D P E T Y E D P N R A V H Q F A K E L D A
AAATTTCCAGGCACCAAAACCTACATTGACCCTGAAACCTATGAGGACCAAAATAGAGCTGTCATCAATTCGCCAAGGAGCTAGATGCC 2122

640 650 660
S C I K I E R V I G A G E F G E V C S G R L K L P G Q R D V
TCCTGTATTTAAATGAGCGTGTGATTGGTGCAGGAGAATTTGGAGAAGTTTGCAGTGGTCGTTTGAACCTTCGGGCCAGAGAGATGTT 2212

670 680 690
A V A I K T L K V G Y T E K Q R R D F L C E A S I M G Q F D
GCAGTGGCCATAAAACCTGAAAGTTGTTACACAGAAAAGCAAGAGGGGACTTTTTATGCGAAGCAAGCATCATGGGGCAATTTGAC 2302

700 710 720
H P N V V H L E G V V T R G K P V M I V I E F M E N G A L D
CACCCAAATGTCGTCATTGGAAGGGGTTGTTACAAGAGGGAAGCCTGTCATGATTGTGATAGAGTTTCATGGAGAATGGAGCCCTGGAT 2392

730 740 750
A F L R K H D G Q F T V I Q L V G M L R G I A A G M R Y L A
GCATTTCTCAGGAACACGATGGGCAGTTTACAGTCATTGAGTGGTATGAGAGGTATTGCCGCTGCCATGCGCATCTGGCT 2482

760 770 780
D M G Y V H R D L A A R N I L V N S N L V C K V S D F G L S
GATATGGGATACGTTACAGGGACCTTGACGGCGCAACATCCTGTCAACAGCAATCTGTTTGTAAAGTGTGAGTTTGGCCTTTCC 2572

790 800 810
R V I E D D P E A V Y T T T G G K I P V R W T A P E A I Q Y
CGGGTTATAGAGGATGATCCGAAGCTGTCTACACCAGACTGGTGGAAAAATTCAGTAAGGTGGACTGCACCGGAAGCCATTCAATAC 2662

820 830 840
R K F T S A S D V W S Y G I V M W E V M S Y G E R P Y W D M
CGGAAGTTACCTCAGCCAGCGATGTGTGGAGCTATGGGATTGTGATGTTGGAAGTGTGCTTATGGAGAAAGACCTTACTGGGACATG 2752

850 860 870
S N Q D V I K A I E E G Y R L P A P M D C P A G L H Q L M L
TCAATCAAGATGTCATTAAAGCGATAGAAGAAGTTATCGTTTGCCGGCGCCATGGATTGCCAGCTGGTCTTACCAGCTAATGCTG 2842

880 890 900
D C W Q K D R A E R P K P E Q I V G I L D K M I R N R S S L
GATTGTTGGCAGAAAGATCGGGCGGAAGGCAAAAGTTTGAGCAGATAGTCGGAATTCAGACAAATGATTGAAACCAAGTAGTCTG 2932

910 920 930
K T P L G T C S R P L S P L L D Q S T P D F T A F C S V G E
AAACACCCCTGGGAACCTGTAGTAGACCTTAAGCCCTCTTGGACCAGAGCACTCCTGACTTCACTGCCTTCTGTTGAGTTGGAGAA 3022

940 950 960
W L Q A I K M E R Y K D N F T A A G Y N S L E S V A R M T I
TGGTTGCAAGCTATTTAAATGGAAGGTATAAGGACAACCTTACAGCAGCGGGTTACAACCTCACTCGAGTCAGTGGCCAGGATGACTATC 3112

970 980 990
D D V M S L G I T L V G E Q K K I M S S I Q T M R A Q M L H
GATGATGTGATGAGTTAGGGATCACACTGGTTGGCCATCAAAAGAAGATCATGAGCAGCATCCAGACTATGCGGGCACAAATGTTGCAT 3202

L H G T G I Q V *
TTACACGGAAACAGGCATCCAAGTGTGA 3229

cacatcgccctccctcagatgaggcttaagactgcaggagaacagttctggccttcagtatacgcatagaatgctgctagaagacagttg 3319
atatactgggtccttctcacaagaaagagaagattttagaagcacctccagacttgactcctaagtccaccagaatatacaaaaagg 3409
aatttaggatccaccactgggtggccaggaacacagcagagacaataaacaagtactacctgaaaacatcccaacacttgagctctcg 3499
aacctcctttttatcttatagacttttttaaaatgtacataaagaatttaagaagaatattttgtcaataaaaaatcatgatcttatt 3589
gttaaaatcaatgaaatattttccttaaaaaa 3628

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gatgttttcatattgtttgctgattggcaggtagttcaaaattgcaagttgccaagagctctgatatttttaacaggattttttttct 3949
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cagattgtttatagagtgtttactagccagaatttaataaaaaaagagagatgtcaatttttaggtttatgtgtatgtataaag 4129
gctgagcttcgtctgaagatgctggtgaagcaagactggaagcgaagctctccagctttggctaaccatccgagcacatcaagagct 4219
tcagctctgtgacagtaagaaatttaggaacatagttgacctatattttgtattcttctgttgatgcagtcacaaatacaaaa 4304

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FIG. 2A

MDK1'-T1

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570      580      590
V A V A G T I I L V F M V F G F I I G R R H C G Y S K A D Q
GTGGCTGTAGCAGGACCATCATCTTGGTGTTCATGGTGTTCGGCTTCATCATTGGAGAGGCACTGTGGTTATAGCAAGGCTGACCAA
600      610
E G D E E L Y F H S L V T N E H L S V L *
GAAGGGGATGAAGAACTCTACTTTCATTCITTAGTAACAATGAGGACCIGTCAGTIIIIAIAAaccgcaacaataactgtttaagacaat
2092
caatttggataaaacaatcaactacagcagagataaatacaagatttttaagtccattttcctttatacattctgcttattttgtgttat
2182
atgtttatttttaaaactctgatcttgattgaatgtgataccataagcacagtttagctgcagtgtataataataaagacattgttctga
2272
gagcagtagcatttcattggaagattgttggcgcttgttaaaataataaagaatttttaaggataatagtgaattttcttcattgc
2362
attaataaccaaataatgcctacctatcttctgtcttgaaaccaaatagaatagatttggaatactttatttgaattgaattgataaaag
2452
ttgactgagcatttatgtgttacctgcatgcttctgggtgcattgaaataatttaacttttaaatgatactatgtgtttcaatttga
2542
ctacctttgtgaggcatabactggctacctcctctattagctaagatcttccaaagccttataatgaagaagtttatataaaccatttctc
2632
tttcaaatcactgtcatacttggtaacggatcccaggaataattgtaattttctaatctcgtcacttggatatccagcctctatta
2722
ccctcaaggatgaatataaaactatgtcttttgatatttctcttggattgtgatagcagtcctcatabcttctgactaattttatgta
2812
tatgtcaacagtggtgtctttaaaataaatacaagaataagtaaaaaaaataaaaaataaaaaataaaaaataaaaaa
2901
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FIG. 2B

MDK1-T2

570 580 590
V A V A G T I I L V F M V F G F I I G R R H C G Y S K A D Q
GTGGCTGTAGCAGGACCATCATCTTGGTGTTCATGGTGTTCGGCTTCATCATTGGAAGAAGGCACCTGTGGTTATAGCAAGGCTGACCAA 2002
600 610 620
E G D E E L Y F H S E Y R E R G D G M E K T Q H N K K W M I
GAAGGGGATGAAGAACTCTACTTTCATTCCTGTTTACAGGGAAGGGGAGACGGGATGGAAAGACACAGCACACATAGAAAGTGGATGAT 2092
A S C S R L *
GCATCGTGCICIGTIIIGTAGTctctcttctctaatcaacactatgatttgaagtacggtacacgaagcaaacgggaagagataagga 2182
attagcattgtgaacctgactgtaatcctctcttccggaagagatgagatgctattgcgatgagaatgtacaacttgcaaccttgaatc 2272
ttttttgataattagtgctcagggaggggggggaagtagagaaagcaaa 2323

FIG. 2C

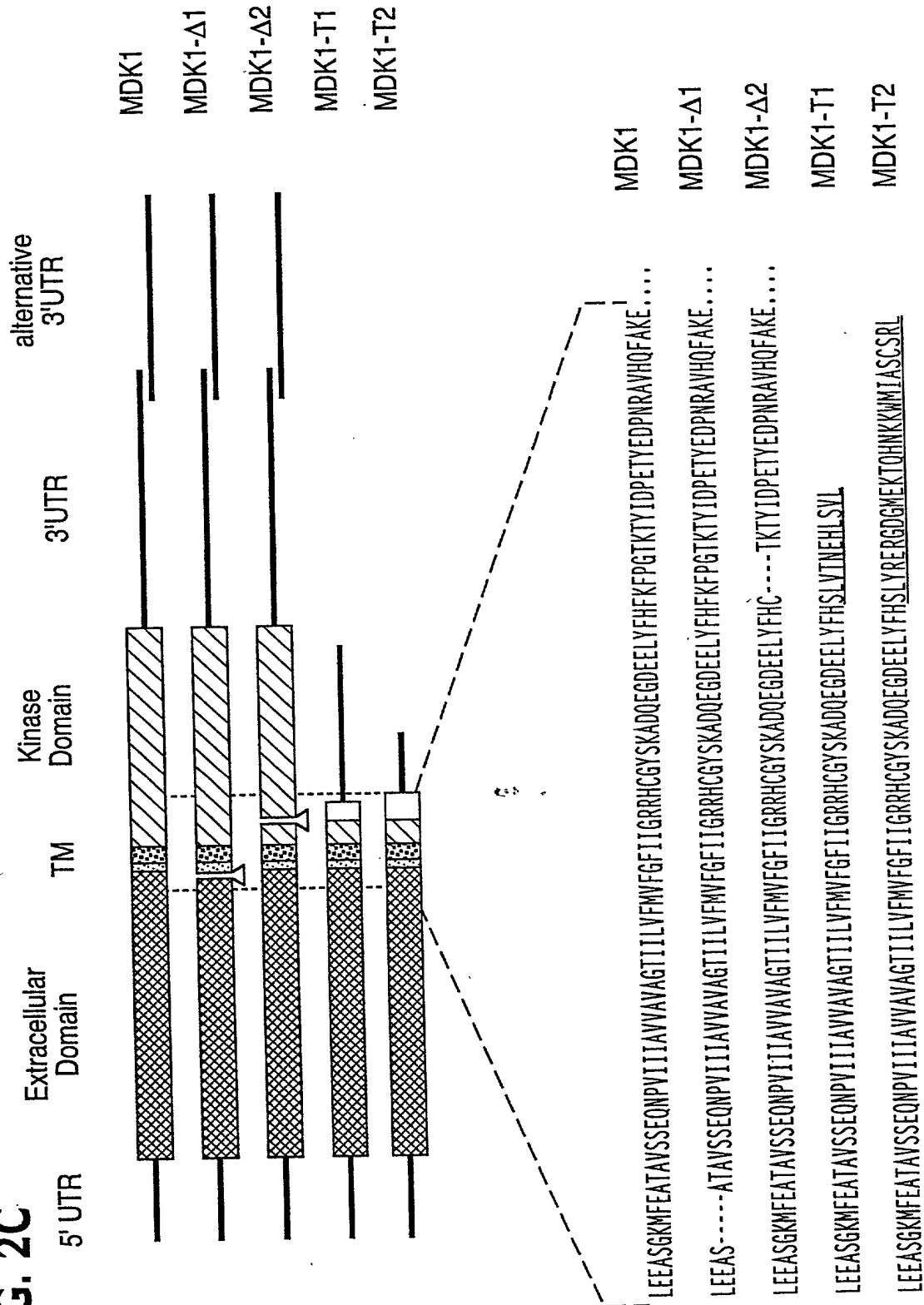


FIG. 3

